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(54) FINE POLYMER PARTICLE AND ITS PRODUCTION

(57) Abstract:

PROBLEM TO BE SOLVED: To obtain fine polymer particles excellent in biocompatibility and safeness and useful as a drug carrier by causing a polymer obtd. by the polymn. of a monomer mixture contg. a monomer having a specific side chain to exist on the surface of a biodegradable polymer.

SOLUTION: A polymer which has a mol. wt. of pref. 1,000-1,000,000 and is obtd. by the polymn. of a monomer mixture contg. a monomer of the formula, pref. comprising the monomer and a monomer copolymerizable therewith (e.g. n-butyl methacrylate) in a molar ratio of (5:95)-(95:5), is caused to exist on the surface of a biodegradable polymer (e.g. poly-L-lactic acid) having a mol. wt. pref. of 1,000-1,000,000, thus giving the objective polymer particles. In the formula, R1 to R3 are each H or a 1-4C alkyl; and (n) is 1-4. Pref., the resultant fine polymer particles are spherical

$$-O = \begin{bmatrix} C & & & & \\ P & O & & & & \\ C & & & & \end{bmatrix} = O = \begin{bmatrix} C & H_{22} & & & \\ & & & & \\ C & & & & \end{bmatrix} = O = \begin{bmatrix} R & & & \\ & R^3 & & \\ & R^3 & & \\ & & & \end{bmatrix}$$

resultant fine polymer particles are spherical and have particle sizes of 1-100,000 nm.

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